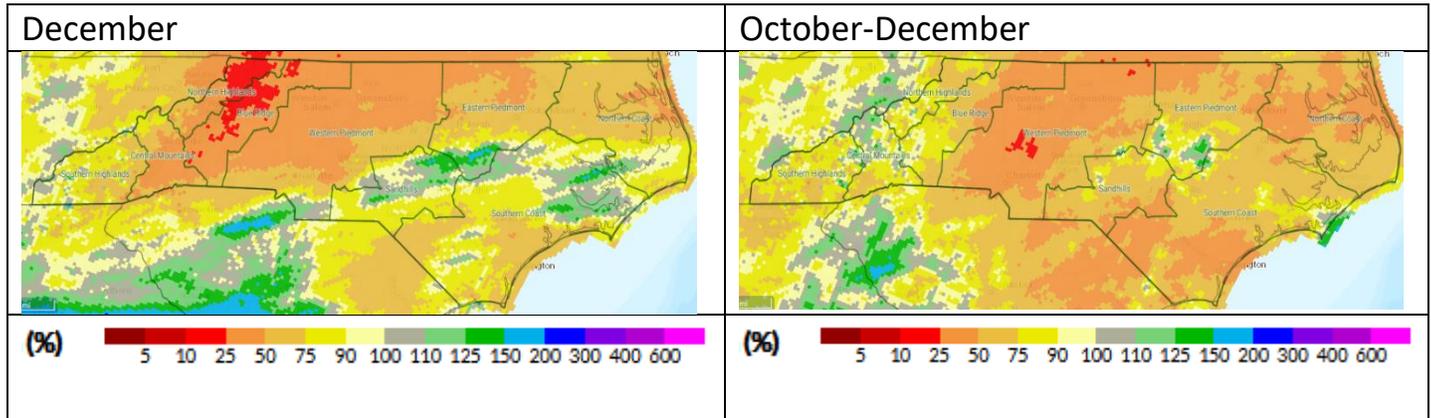


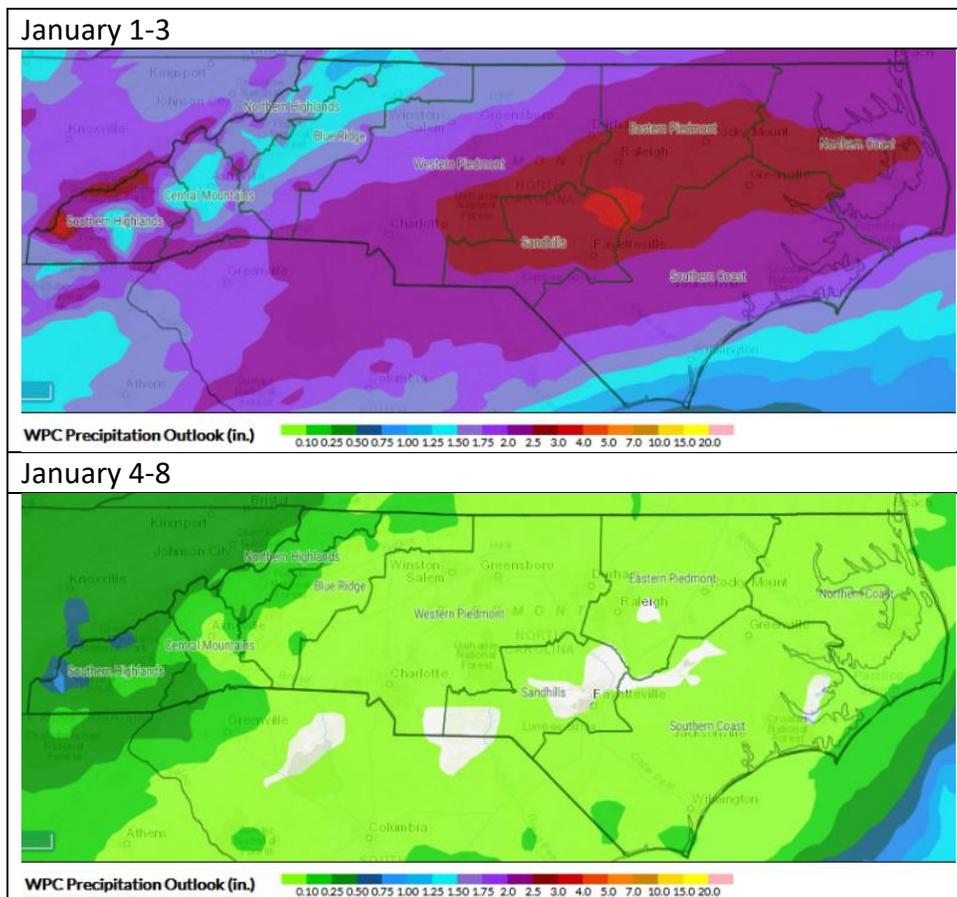
WINTER SEASONAL FIRE DANGER OUTLOOK, JANUARY UPDATE

Percent of Normal Precipitation



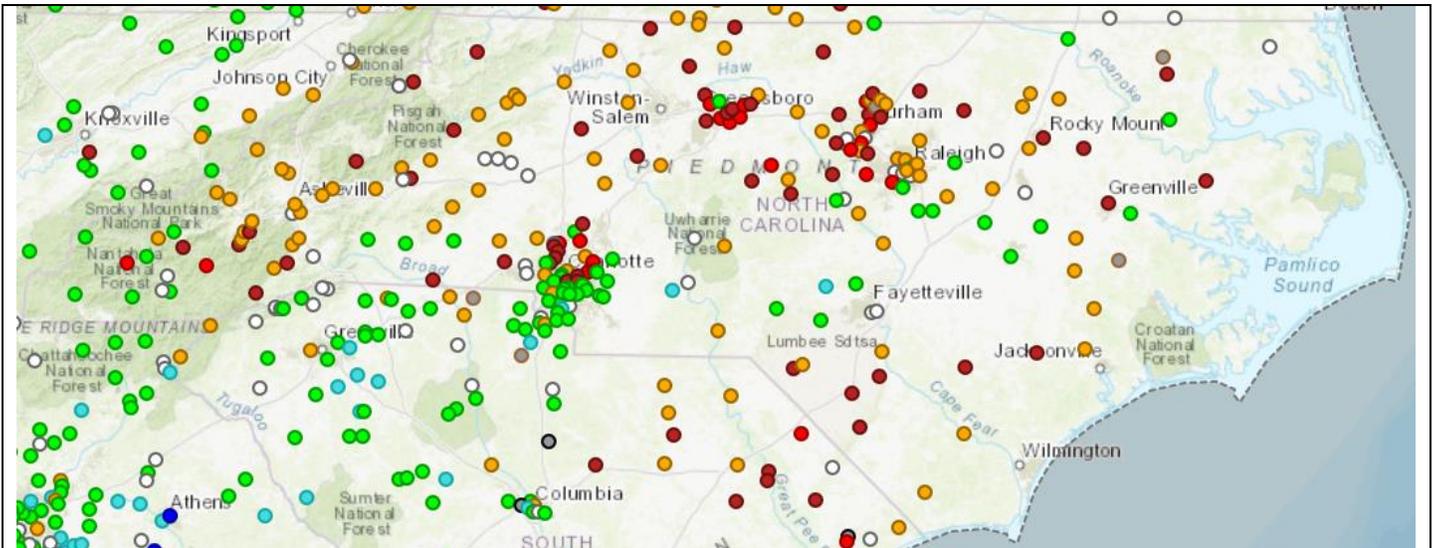
December was much improved over November, but some areas of the N Highlands and Blue Ridge were still below 20% of normal. For the longer term, the N Coast and central coastal plain have improved somewhat, while the W Piedmont has seen an expansion of the 25-50% of normal level over the past month.

Precipitation Forecast



If this forecast comes to fruition, it will be the largest statewide rain event since early September and will increase soil moisture to more normal levels for the winter. It may also be beneficial in recharging ground and surface water levels if 2+” are received.

Current Streamflow Levels



Streamflow: Status

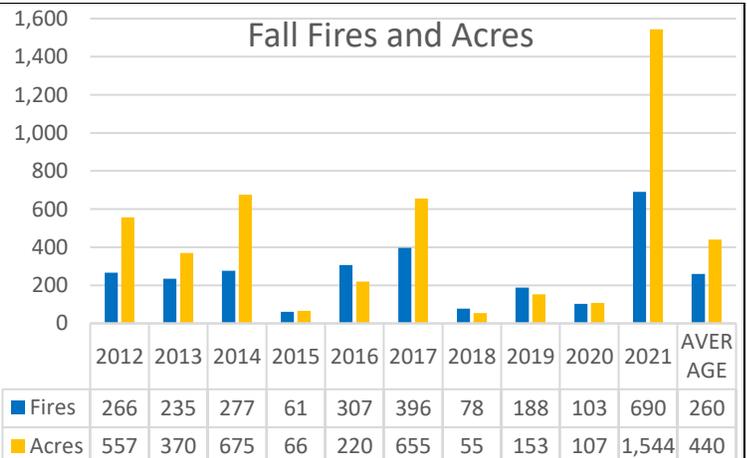
- Above flood stage
- All-time high for this day 100th percentile (maximum)
- Much above normal >90th percentile
- Above normal 76th – 90th percentile
- Normal 25th – 75th percentile
- Below normal 10th – 24th percentile
- Much below normal <10th percentile
- All-time low for this day 0th percentile (minimum)
- Not flowing
- Not ranked
- Measurement flag
- Recent measurement unavailable

Streamflow levels have improved in some areas, especially in the Charlotte metro region. However, many stations are still below normal with more at their all-time lows. Go to <https://dashboard.waterdata.usgs.gov/app/nwd> for more information about each individual station.

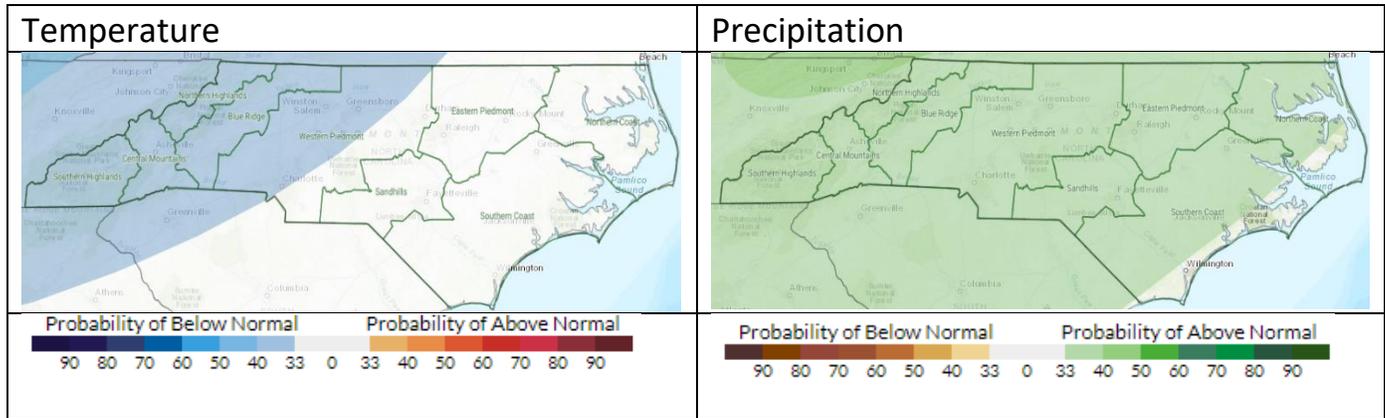
Wildfire Activity Data – State and Private Lands Only

	#Fires	#Acres
December	690	1,544
Dec Average (2012-21)	260	440
Deviation from Average	265%	351%

2021 data come from the Sig 14. All other years come from https://www.ncforestservice.gov/fire_control/pdf/TenYearMonthlyFireAvg.pdf

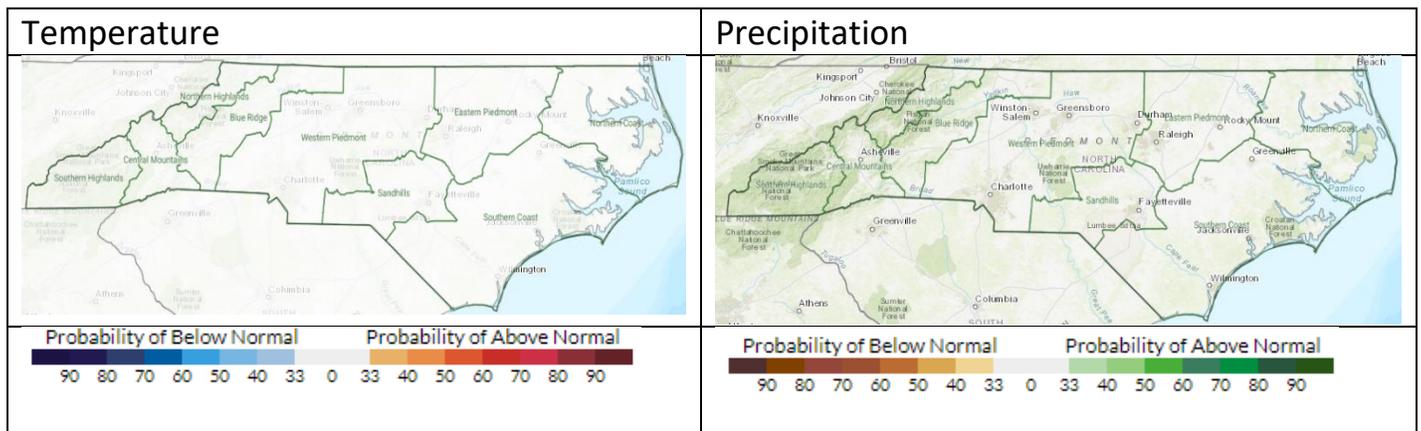


January 6-10 Outlook (as of January 1)



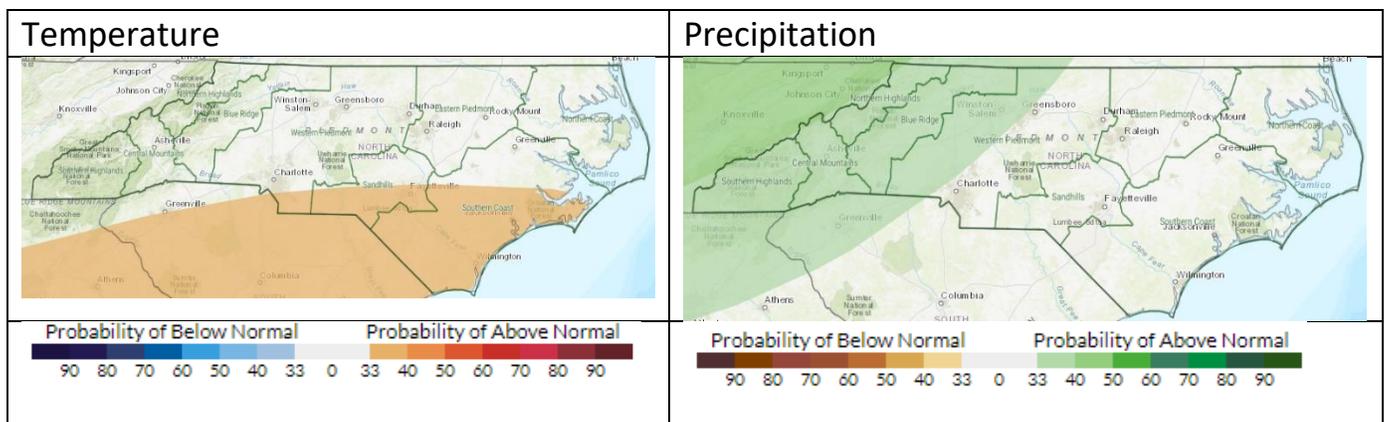
Temperatures are forecast to be near normal for the area east of a line from Charlotte to Burlington and below normal to the west. Precipitation has a slight chance of above normal for most of the state except for a sliver along the coast where it is forecast to be near normal.

January 8-14 (Outlook as of January 1)



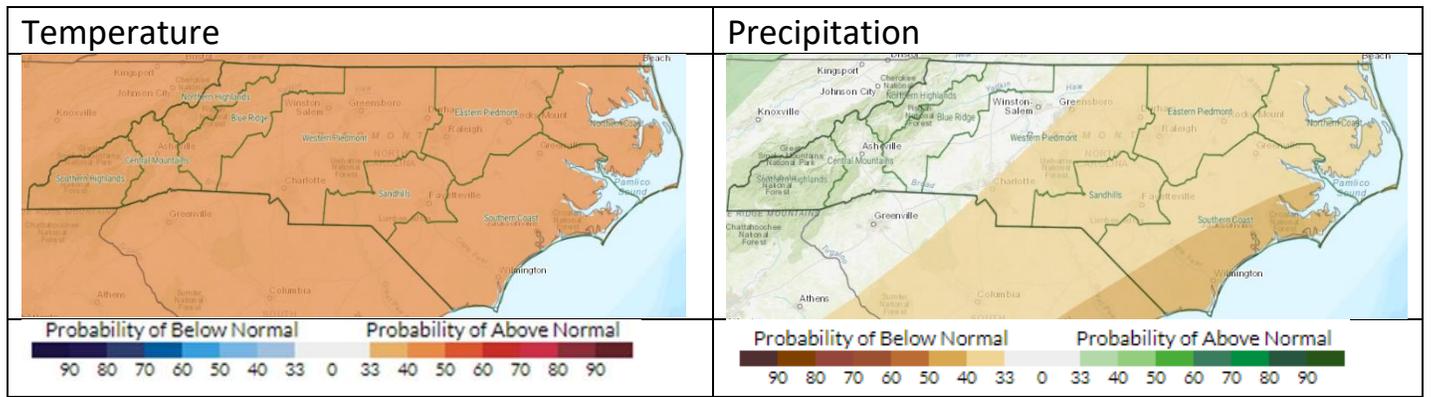
For week 2 of the month, temperatures and precipitation are expected to be near normal. Average weekly precipitation for January ranges from 0.8" (Greensboro) to 2" (Highlands).

January (Outlook as of December 31)



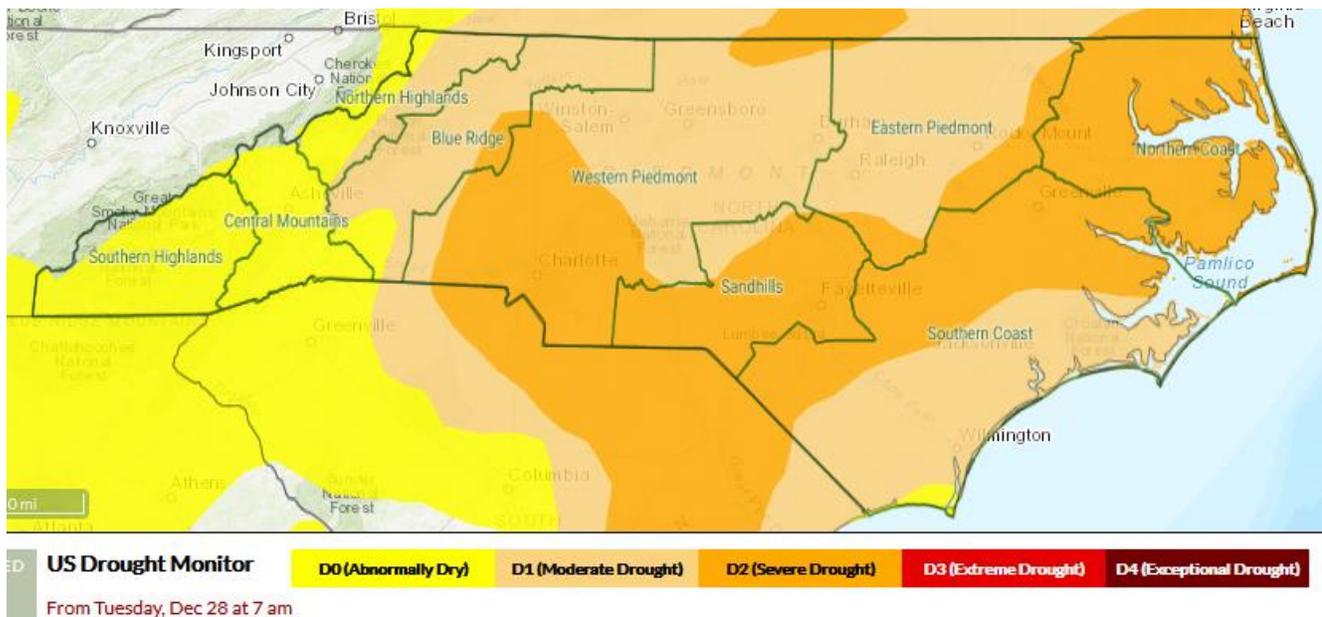
For January as a whole, temperatures look to be normal except for the southern sandhills and coastal plain which have a slight chance of above normal. Precipitation looks to be normal except on a line from Charlotte to Greensboro where there is a slight chance of above normal.

January-March (Outlook as of December 16)



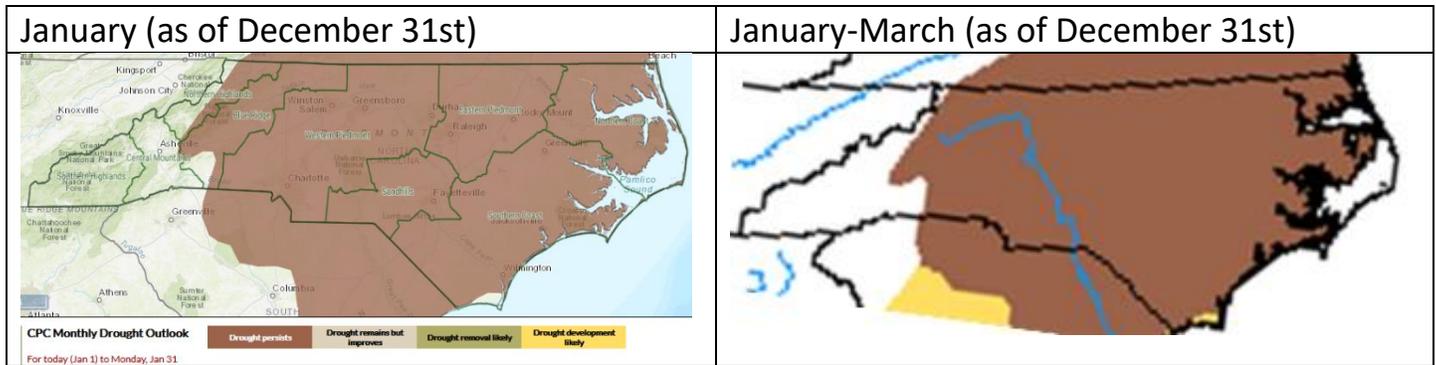
Temperatures are predicted to warm in the February-march time period to bring the average to above normal (40-50% chance). The eastern part of the state is forecast to have below normal precipitation during this time, with the western piedmont, foothills, and mountains near normal.

CURRENT DROUGHT SITUATION



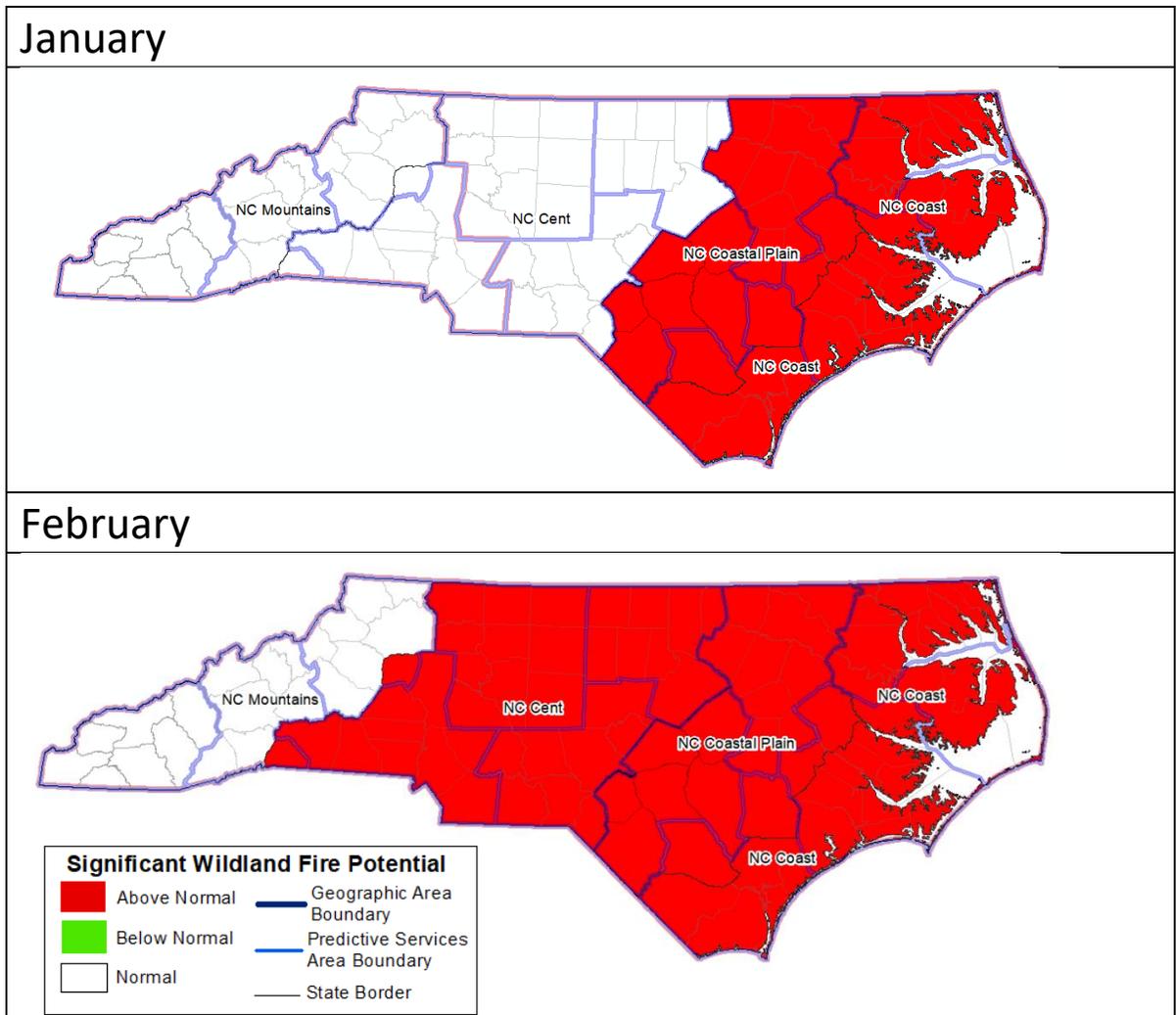
Over 87% of NC is now in some level of drought, up from 65% at the end of November. The recent rains have been just enough to keep the drought map from changing much over the past 3 weeks. For a weekly update (released every Thursday by 0900 ET), go to <https://www.ncdrought.org/>

DROUGHT OUTLOOK

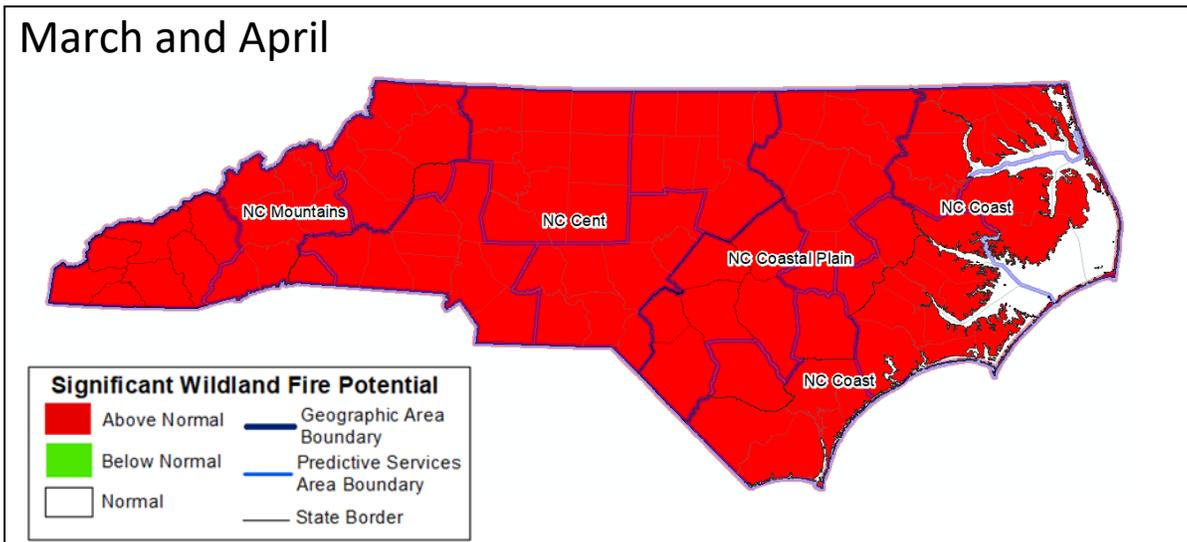


Drought persistence is forecast across the areas of NC currently in drought. Given the forecast for heavy rains over portions of the drought areas, look for possible reductions of one category IF the rain materializes over the next 2 days.

POTENTIAL FOR A SIGNIFICANT FIRE



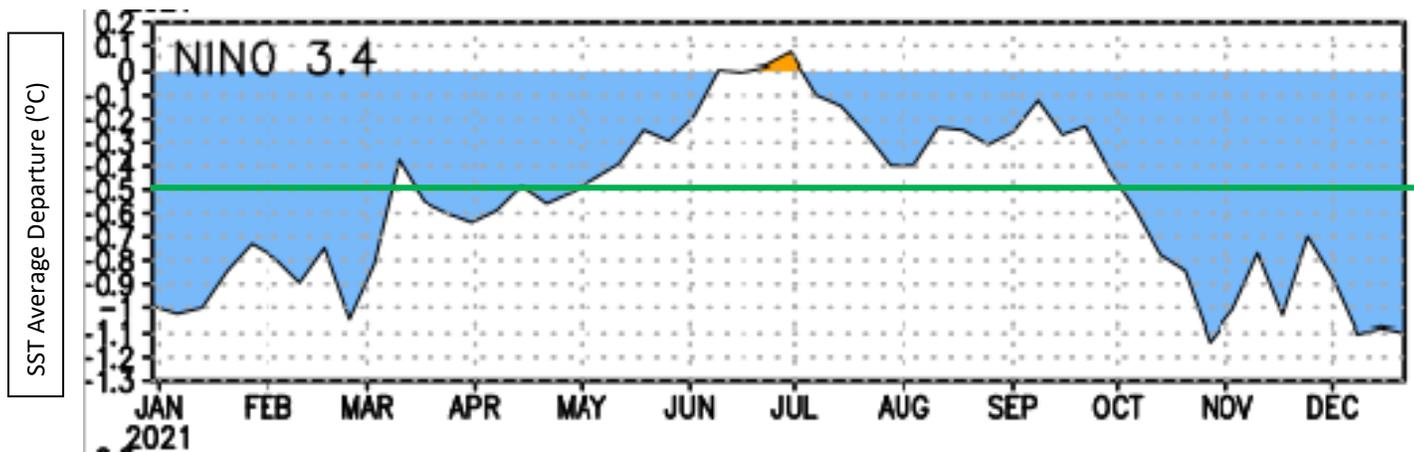
March and April



Predictive Services is now forecasting a continuation of Above Normal potential for the coastal plain areas, with the piedmont moving to Above Normal in February and the mountains joining the rest of the state in March. Continuation of average to below average precipitation and warmer than average temperatures in the long-term forecasts are the primary drivers in these predictions.

ENSO CONDITIONS AND OUTLOOK

The Past Year

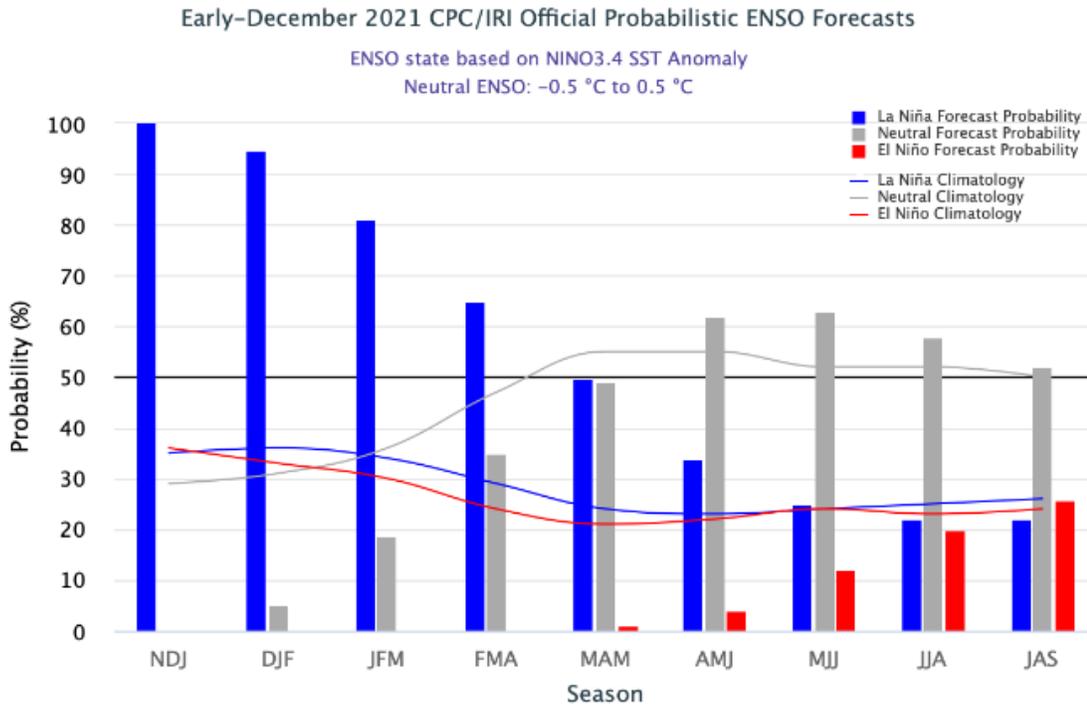


ENSO, or El Nino Southern Oscillation, is a fluctuation in the sea surface temperature (SST) in the equatorial Pacific Ocean. Research has shown that even slight changes in the SST, particularly in area 3.4, can influence weather in North America. Generally, when SSTs are lower than normal, known as La Nina, NC has drier than normal conditions and can have more fire occurrence (Fall 2020/Winter 2021 was an exception). However, La Nina also can lead to more tropical activity. El Nino, on the other hand, usually means wetter weather for NC, but less opportunity for tropical landfalls due to increased wind shear. In order to declare a La Nina, the departure from average SST must average at least -0.5°C (line shown in green) for the previous 3 months (rolling average). For El Nino, the departure must average at least 0.5°C above average for the previous 3 months (rolling average).

La Nina has deepened since late November and is now considered a “major” La Nina event.

ENSO Predictions

CPC/IRI Probabilistic ENSO Outlook (As of December 9th, 2021)



This graph from the Climate Prediction Center International Research Institute shows the probability of the 3 phases of ENSO through this winter and into summer 2022. It has not changed much since last month. It is showing a 90+% chance of La Niña through February, and then continuing into the spring before neutral conditions are predicted to occur.

NCEP CFS.v2 Forecast (As of December 27th, 2021)

